

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMIE C. DA SILVA and
CECILIA MARIA O. DE FGUEIREDO

Appeal No. 1998-3157
Application No. 08/466,797

HEARD: JUNE 13, 2001

Before WARREN, OWENS and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claim 5, the only claim remaining in the application.

THE INVENTION

Claim 5 is illustrative of appellants and is reproduced below.

5. A process for preparing a spherical polyethylene of ultra high molecular weight having an internal attrition angle of from 30 to 40° using a Ziegler-Natta catalyst system in a hydrocarbon solvent which comprises contacting ethylene monomer with the catalyst system in a hydrocarbon solvent and carrying out polymerization for one to three hours in the presence of such catalyst system at 70-85°C and an ethylene pressure between 14 to 20 kgf/cm², wherein the

catalyst system is prepared by a process which comprises the following steps:

- a) spray-drying an aqueous slurry at 8-10 weight % of ammonium dawsonite, the spray-drying being conducting with a spray-dryer including a rotating disk, the dawsonite being synthesized through the reaction of aluminum sulfate and ammonium bicarbonate at a pH from 7.5 to 7.7, wherein the ammonium dawsonite is filtered only between the reaction and the spray-drying, the entrance temperature in the spray-dryer being from 350 to 450°C and the exit temperature being from 130 to 150°C, the feed flowrate of the ammonium dawsonite slurry being from 3.0 to 4.0 kg/minute, and the disk speed being from 10000 to 14000 rpm, and calcining the product from the spray-dryer at 600-700°C for 4 to 6 hours so as to obtain a spherical gamma-aluminum of pore volume from 1.0 to 2.0 ml/g and surface area from 150 to 250 m²/g while the residual sulfate content is between 10 and 20 weight %;
- b) impregnating the aluminum from a) with a titanium halide solution in a hydrocarbon solvent at 80-140°C during one hour or more so that the final titanium content incorporated is from 0.5 to 1.0 weight %, thus making a catalyst composition; and
- c) contacting the catalyst composition from b) with an alkyl aluminum co-catalyst so as to provide an Al/Ti ratio from 15/1 to 60/1; to form a spherical polyethylene of ultrahigh molecular weight having an internal attrition angle of from 30 to 40°.

THE REFERENCES

Pistor	3,627,684	Dec. 14, 1971
McKenzie	4,465,782	Aug. 14, 1984
Green et al. (Green)	4,628,040	Dec. 09, 1986
Lo et al. (Lo)	4,876,321	Oct. 24, 1989
Hang et al. (Hang)	4,983,693	Jan. 08, 1991
Martin et al. (Martin)	5,142,077	Aug. 25, 1992

THE REJECTION

Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable for obviousness over McKenzie in view of Hang, Green, Martin, Lo and Pistor.

OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejection is not well founded. Accordingly, we reverse this rejection.

Appellants' process claim 5 requires, inter alia, a feed flowrate of ammonium dawsonite into the spray-dryer of from 3.0 to 4.0 kg/minute. Claim 5 also requires formation of spherical polyethylene having an internal attrition angle of from 30 to 40°.

Appellants point out that their claimed invention involves a large scale spray dryer. (Brief, page 17). We find that the claimed feed flow rate of 3.0 to 4.0 kg/minute corresponds with a large scale spray dryer.

Appellants rely upon the executed Declaration Under 37 CFR § 1.132 filed November 15, 1996 (hereinafter referred to as "Declaration") for showing that when one would have tested a process like that of the present invention, except using a laboratory scale spray dryer, one would not have prepared a spherical polyethylene having an internal attrition angle of 30 to 40°; rather, one would have prepared a spherical polyethylene having an internal attrition angle on the order of 60 to 80°. Appellants further argue that having obtained such point results, one would have gone on to test a different process rather than scaling up a poor process. (Brief, pages 17-18, Declaration, pages 4-8).

The examiner states the Declaration is not persuasive because it is not a comparison with the closest prior art. (Answer, page 10). However, we agree with appellants' statement made in the paragraph bridging pages 18 and 19 of their Brief, that the Declaration is appropriate evidence to show that the examiner has not provided a prima facie case. Hence we take notice of the evidence in the Declaration.

The examiner believes that Example 15 of McKenzie is the closest disclosure in McKenzie to appellants' claimed invention. (Answer, page 10). We find, however, that Example 15 does not teach appellants' claimed feed flowrate. Although the spray dryer used in Example 15 is not laboratory scale, the examiner has not explained whether it satisfies the feed flowrate requirement of claim 5. Furthermore, the examiner has not explained why one skilled in the art would choose to utilize a spray dryer from spray drying an aqueous slurry of ammonium dawsonite wherein the feed flowrate is from 3.0 to 4.0 kg/minute for forming a spherical polyethylene having an internal attrition angle of from 30 to 40°. Yet, the examiner states he "has a reasonable basis to suspect that the polyethylene produced by using the titanium catalyst of McKenzie's example 15 possesses the similar property [claimed internal attrition angle] based on the fact that a substantially similar spray dryer being used to make the catalyst support." (Answer, page 7).

Given the above-mentioned short comings regarding the spray drying operation of McKenzie's Example 15, we do not find the examiner's speculation reasonable. In this context we also appreciate appellants' statement made on

pages 1-6 of the Reply Brief regarding other differences found in the McKenzie's spray drying operation. We further note that the examiner's speculation that the polyethylene produced according to the McKenzie's Example 15 would possess an internal attrition angle from 30 to 40° is unsubstantiated as a matter of law. The prior art compound or composition may possible have the same features will not substantiate a finding of inherency. Rather, inherency must flow as a necessary conclusion from the prior art, not simply a possible one. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). Furthermore, we agree with appellants' quoting of the court in In re Newell, 891 F.2d 899, 901, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989), that "a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination." Moreover, as mentioned, supra, the examiner has not even satisfied that the product would inherently have an internal attrition angle property as claimed.

With respect to the secondary references of Hang, Green, Martin, Lo, and Pistor, we find that these references do not cure the deficiencies found in McKenzie.

Appeal No. 1998-3157
Application No. 08/466,797

In view of the above, we find that the examiner has not met his burden for establishing a prima facie case. Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. & Int. 1985). Hence, we reverse.

REVERSED

CHARLES F. WARREN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
TERRY J. OWENS)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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)	
BEVERLY A. PAWLIKOWSKI)	
Administrative Patent Judge)	

SLD

Appeal No. 1998-3157
Application No. 08/466,797

SUGHRUE, MION, MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20037-3202